



SATIMO Uncertainty- SN 08/21 EPG0352									
° System Check uncertainty for DUT averaged over 1 gram / 10 gram.									
Uncertainty Component	Sec.	Tol	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	vi
		(+-%)							
Measurement System									
Probe calibration drift	E.2.1.3	5.72	N	1.00	1.00	1.00	5.72	5.72	∞
Axial Isotropy	E.2.2	0.18	R	1.73	0.00	0.00	0.00	0.00	∞
Hemispherical Isotropy	E.2.2	1.04	R	1.73	0.00	0.00	0.00	0.00	∞
Boundary effect	E.2.3	0.8	R	1.73	0.00	0.00	0.00	0.00	∞
Linearity	E.2.4	1.25	R	1.73	0.00	0.00	0.00	0.00	∞
System detection limits	E.2.4	1.20	R	1.73	0.00	0.00	0.00	0.00	∞
Modulation response	E.2.5	3.42	R	1.73	0.00	0.00	0.00	0.00	∞
Readout Electronics	E.2.6	0.26	N	1.00	0.00	0.00	0.00	0.00	∞
Response Time	E.2.7	0.17	R	1.73	0.00	0.00	0.00	0.00	∞
Integration Time	E.2.8	1.43	R	1.73	0.00	0.00	0.00	0.00	∞
RF ambient conditions-Noise	E.6.1	3.51	R	1.73	0.00	0.00	0.00	0.00	∞
RF ambient conditions-reflections	E.6.1	3.15	R	1.73	0.00	0.00	0.00	0.00	∞
Probe positioner mechanical tolerance	E.6.2	1.2	R	1.73	1.00	1.00	0.69	0.69	∞
Probe positioning with respect to phantom shell	E.6.3	1.4	R	1.73	1.00	1.00	0.81	0.81	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	3.9	R	1.73	0.00	0.00	0.00	0.00	∞
System check source (dipole)									
Deviation of experimental dipoles	E.6.4	4.8	N	1.00	1.00	1.00	4.80	4.80	∞
Input power and SAR drift measurement	8,6.6.4	5.1	R	1.73	1.00	1.00	2.94	2.94	∞
Dipole axis to liquid distance	8,E.6.6	2.4	R	1.73	1.00	1.00	1.39	1.39	∞
Phantom and tissue parameters									
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	3.7	R	1.73	1.00	1.00	2.14	2.14	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1.00	1.00	0.84	1.90	1.60	∞
Liquid conductivity measurement	E.3.3	2.4	R	1.73	0.78	0.71	1.08	0.98	∞
Liquid permittivity measurement	E.3.3	4.1	N	1.00	0.78	0.71	3.20	2.91	M
Liquid conductivity—temperature uncertainty	E.3.4	2.7	R	1.73	0.23	0.26	0.36	0.41	∞
Liquid permittivity—temperature uncertainty	E.3.4	4.8	N	1.00	0.23	0.26	1.10	1.25	M
Combined Standard Uncertainty			RSS				5.56	5.20	
Expanded Uncertainty (95% Confidence interval)			K=2				11.12	10.41	



10. Conducted Power Measurement

10.1 Test Result

Burst Average Power (dBm)						
Band	GSM 850			PCS 1900		
Channel	128	190	251	512	661	810
Frequency (MHz)	824.2	836.6	848.8	1850.2	1880.0	1909.8
GSM(GMSK, 1-Slot)	33.47	33.63	33.43	31.09	31.05	31.04
GPRS (GMSK, 1-Slot)	33.44	33.64	33.41	31.00	30.87	30.90
GPRS (GMSK, 2-Slot)	31.45	31.79	31.56	29.13	28.95	28.93
GPRS (GMSK, 3-Slot)	29.63	30.00	29.70	27.76	27.54	27.55
GPRS (GMSK, 4-Slot)	27.57	27.92	27.66	25.80	25.61	25.62
EGPRS(8PSK, 1-Slot)	26.06	26.78	25.86	25.41	25.16	25.27
EGPRS(8PSK, 2-Slot)	24.37	24.82	24.04	24.09	23.95	23.70
EGPRS(8PSK, 3-Slot)	22.06	22.96	21.91	21.89	21.36	21.26
EGPRS(8PSK, 4-Slot)	20.12	20.84	20.06	18.79	19.02	18.60
Remark: GPRS, CS4 coding scheme. EGPRS, MCS5 coding scheme. Multi-Slot Class 8, Support Max 4 downlink, 1 uplink, 5 working link Multi-Slot Class 10, Support Max 4 downlink, 2 uplink, 5 working link Multi-Slot Class 12, Support Max 4 downlink, 4 uplink, 5 working link						

Frame- Average Power(dBm)						
Band	GSM 850			PCS 1900		
Channel	128	190	251	512	661	810
Frequency (MHz)	824.2	836.6	848.8	1850.2	1880.0	1909.8
GSM(GMSK, 1-Slot)	24.44	24.60	24.40	22.06	22.02	22.01
GPRS (GMSK, 1-Slot)	24.41	24.61	24.38	21.97	21.84	21.87
GPRS (GMSK, 2-Slot)	25.43	25.77	25.54	23.11	22.93	22.91
GPRS (GMSK, 3-Slot)	25.37	25.74	25.44	23.50	23.28	23.29
GPRS (GMSK, 4-Slot)	24.56	24.91	24.65	22.79	22.60	22.61
EGPRS(8PSK, 1-Slot)	17.03	17.75	16.83	16.38	16.13	16.24
EGPRS(8PSK, 2-Slot)	18.35	18.80	18.02	18.07	17.93	17.68
EGPRS(8PSK, 3-Slot)	17.80	18.70	17.65	17.63	17.10	17.00
EGPRS(8PSK, 4-Slot)	17.11	17.83	17.05	15.78	16.01	15.59
Remark : 1. SAR testing was performed on the maximum frame-averaged power mode. 2. The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum Burst - averaged power based on time slots. The calculated method is shown as below: Frame-averaged power = Burst averaged power (1 TX Slot) – 9.03 dB Frame-averaged power = Burst averaged power (2 TX Slots) – 6.02 dB Frame-averaged power = Burst averaged power (3 TX Slots) - 4.26 dB Frame-averaged power = Burst averaged power (4 TX Slots) – 3.01 dB						

**WCDMA**

Band	WCDMA Band 2			WCDMA Band 4			WCDMA Band 5		
Channel	9262	9400	9538	1312	1413	1513	4132	4183	4233
Frequency (MHz)	1852.4	1880	1907.6	1712.6	1740	1752.4	826.4	836.6	846.6
RMC 12.2Kbps	22.89	23.36	23.64	22.57	21.96	22.39	22.96	23.00	23.30
HSDPA Subtest-1	23.19	23.13	23.23	22.09	21.64	22.02	22.76	22.70	22.53
HSDPA Subtest-2	22.95	22.94	22.98	22.15	21.44	21.83	22.56	22.47	22.29
HSDPA Subtest-3	22.93	22.74	22.56	21.69	21.28	21.64	22.26	22.08	22.05
HSDPA Subtest-4	22.75	22.49	22.59	21.73	21.31	21.53	21.88	21.91	21.88
HSUPA Subtest-1	23.06	23.05	23.01	22.15	21.45	21.92	22.81	22.72	22.55
HSUPA Subtest-2	23.12	23.14	23.17	22.38	21.63	22.03	22.88	22.74	22.71
HSUPA Subtest-3	22.76	22.67	22.89	22.22	21.34	21.76	22.51	22.42	22.36
HSUPA Subtest-4	23.11	23.12	23.21	22.35	21.60	22.05	22.80	22.79	22.69
HSUPA Subtest-5	22.59	22.89	22.93	22.02	21.28	21.96	22.49	22.55	22.35

According to 3GPP 25.101 sub-clause 6.2.2, the maximum output power is allowed to be reduced by following the table.

Table 6.1A: UE maximum output power with HS-DPCCH and E-DCH

UE Transmit Channel Configuration	CM(db)	MPR(db)
For all combinations of ,DPDCH,DPCCH HS-DPDCH,E-DPDCH and E-DPCCH	$0 \leq CM \leq 3.5$	$MAX(CM-1,0)$
Note: CM=1 for $\beta_c/\beta_d=12/15$, $\beta_{hs}/\beta_c=24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.		

The device supports MPR to solve linearity issues (ACLR or SEM) due to the higher peak-to average ratios (PAR) of the HSUPA signal. This prevents saturating the full range of the TX DAC inside of device and provides a reduced power output to the RF transceiver chip according to the Cubic Metric (a function of the combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH).

When E-DPDCH channels are present the beta gains on those channels are reduced firsts to try to get the power under the allowed limit. If the beta gains are lowered as far as possible, then a hard limiting is applied at the maximum allowed level.

The SW currently recalculates the cubic metric every time the beta gains on the E-DPDCH are reduced. The cubic metric will likely get lower each time this is done .However, there is no reported reduction of maximum output power in the HSUPA mode since the device also provides a compensation for the power back-off by increasing the gain of TX_AGC in the transceiver (PA) device.

The end effect is that the DUT output power is identical to the case where there is no MPR in the device.



2.4G WLAN

2.4GWIFI				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
802.11b	1	2412	12.32	17.06
	7	2437	12.29	16.94
	11	2462	11.40	13.80
802.11g	1	2412	11.14	13.00
	7	2437	11.79	15.10
	11	2462	10.81	12.05
802.11 n-HT20	1	2412	10.33	10.79
	7	2437	10.97	12.50
	11	2462	9.95	9.89
802.11 n-HT40	3	2422	8.69	7.40
	6	2437	8.98	7.91
	9	2452	9.08	8.09

Bluetooth

BT				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	0.59	1.15
	39	2441	0.16	1.04
	78	2480	0.37	1.09
$\pi/4$ -QPSK(2Mbps)	0	2402	1.53	1.42
	39	2441	1.26	1.34
	78	2480	1.40	1.38
8DPSK(3Mbps)	0	2402	1.77	1.50
	39	2441	1.44	1.39
	78	2480	1.62	1.45



BLE

BLE				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	2.11	1.63
	19	2440	0.95	1.24
	39	2480	1.99	1.58
GFSK(2Mbps)	0	2402	1.84	1.53
	19	2440	0.63	1.16
	39	2480	1.69	1.48

WLAN (5.2Gband)

5.2G WLAN				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
802.11a	36	5180	12.86	19.32
	40	5200	11.98	15.78
	48	5240	11.98	15.78
802.11 n-HT20	36	5180	11.30	13.49
	40	5200	10.64	11.59
	48	5240	10.33	10.79
802.11 n-HT40	38	5190	10.14	10.33
	46	5230	9.14	8.20
802.11ac-VHT20	36	5180	11.39	13.77
	40	5200	10.62	11.53
	48	5240	10.13	10.30
802.11ac-VHT40	38	5190	9.85	9.66
	46	5230	9.20	8.32
802.11ac-VHT80	42	5210	8.56	7.18



WLAN (5.8Gband)

5.8G WLAN				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
802.11a	149	5745	9.86	9.68
	157	5785	9.56	9.04
	165	5825	9.77	9.48
802.11 n-HT20	149	5745	8.26	6.70
	157	5785	7.91	6.18
	165	5825	8.25	6.68
802.11 n-HT40	151	5755	7.60	5.75
	159	5795	6.93	4.93
802.11ac-VHT20	149	5745	8.36	6.85
	157	5785	7.82	6.05
	165	5825	8.34	6.82
802.11ac-VHT40	151	5755	7.41	5.51
	159	5795	7.02	5.04
802.11ac-VHT80	155	5775	6.43	4.40



LTE Conducted Power

General Note:

1. Anritsu CMW500 base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
 2. Per KDB 941225 D05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
 3. Per KDB 941225 D05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
 4. Per KDB 941225 D05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
 5. Per KDB 941225 D05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
 6. Per KDB 941225 D05, 16QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05, 16QAM SAR testing is not required.
 7. Per KDB 941225 D05, Smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05, smaller bandwidth SAR testing is not required.
 8. According to April 2015 TCB workshop, SAR test exclusion can be applied for testing overlapping LTE bands as follows:
 - a) The maximum output power, including tolerance, for the smaller band must be $\leq$ the larger band to qualify for the SAR test exclusion.
 - b) The channel bandwidth and other operating parameters for the smaller band must be fully supported by the larger band.
- . LTE Band 2 (1850-1910 MHz) is covered by LTE Band 25(1850-1915 MHz)
 - .LTE Band 4 (1710-1755 MHz) is covered by LTE Band66 (1710-1780MHz)
 - .LTE Band 17 (704-716 MHz) is covered by LTE Band 12(699-716MHz)



LTE Band 2

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.63	23.87	24.23
1.4	1	2		23.55	23.83	24.28
1.4	1	5		23.55	23.86	24.31
1.4	3	0		23.44	23.98	24.22
1.4	3	1		23.36	23.94	24.20
1.4	3	2		23.48	23.96	24.18
1.4	6	0		22.93	23.44	23.72
1.4	1	0	16-QAM	23.71	22.41	23.25
1.4	1	2		23.74	22.45	23.28
1.4	1	5		23.68	22.43	23.31
1.4	3	0		22.83	22.85	23.32
1.4	3	1		22.83	22.94	23.21
1.4	3	2		22.82	22.96	23.23
1.4	6	0		21.82	21.94	22.38
3	1	0	QPSK	23.52	23.85	24.13
3	1	7		23.43	23.93	24.20
3	1	14		23.44	23.83	24.29
3	8	0		22.91	23.44	23.71
3	8	4		22.88	23.48	23.70
3	8	7		22.95	23.44	23.71
3	15	0		22.98	23.45	23.78
3	1	0	16-QAM	23.87	22.39	23.64
3	1	7		23.80	22.42	23.56
3	1	14		23.76	22.38	23.54
3	8	0		21.48	22.01	22.44
3	8	4		21.43	21.93	22.33
3	8	7		21.51	22.01	22.34
3	15	0		21.63	21.97	22.33



LTE BAND 2

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.42	24.00	23.93
5	1	12		23.38	24.00	23.95
5	1	24		23.30	24.05	23.98
5	12	0		23.00	23.49	23.62
5	12	6		23.04	23.40	23.70
5	12	11		22.93	23.48	23.68
5	25	0		23.03	23.37	23.78
5	1	0	16-QAM	22.62	23.09	23.72
5	1	12		22.60	23.01	23.85
5	1	24		22.52	23.12	23.89
5	12	0		21.55	21.74	22.22
5	12	6		21.47	21.77	22.30
5	12	11		21.46	21.86	22.18
5	25	0		21.70	22.07	22.47
10	1	0	QPSK	23.37	23.74	24.06
10	1	24		23.31	23.89	24.20
10	1	49		23.30	23.88	24.29
10	25	0		23.02	23.46	23.50
10	25	12		22.94	23.31	23.63
10	25	24		22.87	23.44	23.66
10	50	0		22.82	23.32	23.71
10	1	0	16-QAM	23.80	23.15	23.44
10	1	24		23.64	22.97	23.54
10	1	49		23.62	23.06	23.61
10	25	0		21.56	22.00	22.23
10	25	12		21.51	21.97	22.27
10	25	24		21.56	22.12	22.38
10	50	0		21.49	22.03	22.16



LTE BAND 2

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	23.34	23.65	23.89
15	1	37		23.27	23.85	23.99
15	1	74		23.41	23.97	24.13
15	36	0		22.81	23.35	23.50
15	36	18		22.90	23.48	23.61
15	36	39		22.90	23.50	23.60
15	75	0		22.93	23.29	23.65
15	1	0	16-QAM	23.77	23.63	23.71
15	1	38		23.61	23.73	23.87
15	1	75		23.68	23.83	24.00
15	36	0		21.53	22.09	22.10
15	36	18		21.49	22.09	22.18
15	36	39		21.61	22.14	22.29
15	75	0		21.47	21.98	22.20
20	1	0	QPSK	23.54	23.93	24.00
20	1	49		23.46	24.22	24.11
20	1	99		23.75	24.28	24.28
20	50	0		22.86	23.21	23.55
20	50	24		22.88	23.38	23.59
20	50	49		22.91	23.57	23.54
20	100	0		22.94	23.47	23.56
20	1	0	16-QAM	22.65	22.32	23.30
20	1	49		22.56	22.62	23.42
20	1	99		22.79	22.77	23.64
20	50	0		21.60	21.89	22.08
20	50	24		21.60	22.04	22.25
20	50	49		21.64	22.01	22.29
20	100	0		21.51	21.95	22.18



LTE BAND 4

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.99	22.49	22.88
1.4	1	2		22.98	22.64	22.75
1.4	1	5		22.98	22.64	22.73
1.4	3	0		22.85	22.41	22.70
1.4	3	1		22.78	22.48	22.59
1.4	3	2		22.76	22.45	22.49
1.4	6	0		22.35	22.02	22.17
1.4	1	0	16-QAM	23.53	22.05	21.82
1.4	1	2		23.49	22.08	21.78
1.4	1	5		23.52	22.15	21.76
1.4	3	0		22.18	21.46	21.59
1.4	3	1		22.16	21.51	21.64
1.4	3	2		22.17	21.53	21.56
1.4	6	0		21.11	20.75	20.75
3	1	0	QPSK	22.74	22.48	22.90
3	1	7		22.76	22.61	22.88
3	1	14		22.77	22.61	22.67
3	8	0		22.41	21.84	22.21
3	8	4		22.28	21.89	22.23
3	8	7		22.32	21.90	22.14
3	15	0		22.38	22.04	22.18
3	1	0	16-QAM	23.57	22.01	21.86
3	1	7		23.57	22.12	21.79
3	1	14		23.55	22.14	21.74
3	8	0		20.82	20.56	20.88
3	8	4		20.79	20.60	20.90
3	8	7		20.83	20.65	20.84
3	15	0		21.01	20.52	20.76



LTE BAND 4

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.81	22.48	22.59
5	1	12		22.75	22.53	22.49
5	1	24		22.70	22.55	22.25
5	12	0		22.35	21.90	22.26
5	12	6		22.39	22.06	22.12
5	12	11		22.36	21.98	22.17
5	25	0		22.38	21.97	22.23
5	1	0	16-QAM	22.44	22.06	22.89
5	1	12		22.47	22.12	22.83
5	1	24		22.37	22.14	22.72
5	12	0		20.82	20.29	20.85
5	12	6		20.87	20.34	20.75
5	12	11		20.79	20.44	20.69
5	25	0		21.01	20.60	20.88
10	1	0	QPSK	22.75	22.29	22.78
10	1	24		22.63	22.38	23.01
10	1	49		22.53	22.48	22.57
10	25	0		22.27	21.91	22.37
10	25	12		22.27	22.00	22.39
10	25	24		22.23	21.93	22.32
10	50	0		22.24	22.05	22.41
10	1	0	16-QAM	23.59	22.71	23.22
10	1	24		23.53	22.77	23.40
10	1	49		23.35	22.82	23.11
10	25	0		20.89	20.48	21.05
10	25	12		20.86	20.58	21.06
10	25	24		20.77	20.53	20.90
10	50	0		20.88	20.64	20.96



LTE BAND 4

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.73	22.34	22.50
15	1	37		22.57	22.37	22.95
15	1	74		22.38	22.48	22.49
15	36	0		22.25	21.90	22.11
15	36	18		22.25	21.94	22.54
15	36	39		21.95	21.95	22.24
15	75	0		22.10	21.96	22.48
15	1	0	16-QAM	23.56	22.72	23.20
15	1	38		23.40	22.73	23.54
15	1	75		23.24	22.85	23.19
15	36	0		20.95	20.54	20.73
15	36	18		20.80	20.71	20.95
15	36	39		20.67	20.63	20.78
15	75	0		20.77	20.52	21.07
20	1	0	QPSK	22.90	22.66	22.45
20	1	49		22.63	22.72	22.67
20	1	99		22.48	22.94	22.77
20	50	0		22.15	21.80	22.12
20	50	24		22.13	22.06	22.13
20	50	49		21.92	22.05	22.35
20	100	0		22.06	22.10	22.05
20	1	0	16-QAM	22.48	22.16	22.49
20	1	49		22.23	22.22	22.60
20	1	99		22.06	22.38	22.41
20	50	0		20.84	20.50	20.66
20	50	24		20.69	20.61	20.76
20	50	49		20.55	20.64	20.92
20	100	0		20.62	20.68	20.71



LTE BAND 5

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.70	23.56	23.93
1.4	1	2		23.56	23.55	24.02
1.4	1	5		23.63	23.59	23.90
1.4	3	0		23.50	23.44	23.79
1.4	3	1		23.57	23.50	23.89
1.4	3	2		23.56	23.43	23.80
1.4	6	0		23.06	22.93	23.37
1.4	1	0	16-QAM	24.14	23.03	23.56
1.4	1	2		24.10	23.09	23.46
1.4	1	5		24.13	23.04	23.50
1.4	3	0		22.85	22.56	22.75
1.4	3	1		22.83	22.54	22.77
1.4	3	2		22.77	22.58	22.77
1.4	6	0		21.82	21.75	21.89
3	1	0	QPSK	23.48	23.51	23.93
3	1	7		23.42	23.59	24.03
3	1	14		23.46	23.64	23.93
3	8	0		22.99	22.93	23.26
3	8	4		23.04	22.99	23.26
3	8	7		22.96	22.96	23.28
3	15	0		23.00	22.95	23.37
3	1	0	16-QAM	24.10	23.04	23.49
3	1	7		24.10	23.04	23.54
3	1	14		24.09	23.03	23.53
3	8	0		21.42	21.60	21.87
3	8	4		21.46	21.51	21.89
3	8	7		21.41	21.48	21.98
3	15	0		21.69	21.43	21.93



LTE BAND 5

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.54	23.45	23.59
5	1	12		23.47	23.52	23.72
5	1	24		23.40	23.60	23.60
5	12	0		23.10	23.05	23.27
5	12	6		23.00	23.00	23.35
5	12	11		22.94	23.07	23.29
5	25	0		22.95	23.04	23.35
5	1	0	16-QAM	23.13	23.01	23.86
5	1	12		23.09	23.01	24.00
5	1	24		23.09	23.14	23.82
5	12	0		21.55	21.31	21.81
5	12	6		21.50	21.35	21.90
5	12	11		21.45	21.35	21.85
5	25	0		21.72	21.56	22.04
10	1	0	QPSK	23.45	23.35	23.56
10	1	24		23.31	23.41	23.76
10	1	49		23.37	23.60	23.95
10	25	0		23.04	22.92	23.16
10	25	12		22.93	23.06	23.24
10	25	24		22.89	23.00	23.40
10	50	0		22.98	23.06	23.26
10	1	0	16-QAM	24.05	23.54	23.37
10	1	24		23.97	23.64	23.52
10	1	49		24.06	23.87	23.62
10	25	0		21.54	21.55	21.76
10	25	12		21.53	21.55	21.80
10	25	24		21.54	21.61	21.94
10	50	0		21.59	21.59	21.73



LTE BAND 7

LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	21.03	21.53	21.93
5	1	12		21.04	21.67	21.87
5	1	24		21.22	21.85	21.94
5	12	0		20.72	21.15	21.42
5	12	6		20.68	21.18	21.49
5	12	11		20.72	21.22	21.47
5	25	0		20.65	21.20	21.55
5	1	0	16-QAM	20.65	20.86	21.64
5	1	12		20.78	20.99	21.63
5	1	24		20.90	21.17	21.64
5	12	0		19.18	19.64	20.12
5	12	6		19.13	19.71	20.11
5	12	11		19.19	19.73	20.10
5	25	0		19.42	19.81	20.09
10	1	0	QPSK	21.04	21.63	22.11
10	1	24		21.25	21.80	21.99
10	1	49		21.40	22.03	22.07
10	25	0		20.61	21.08	21.49
10	25	12		20.78	21.25	21.44
10	25	24		20.86	21.37	21.46
10	50	0		20.94	21.18	21.61
10	1	0	16-QAM	21.75	21.18	21.68
10	1	24		21.98	21.39	21.64
10	1	49		22.16	21.62	21.61
10	25	0		19.26	19.82	20.15
10	25	12		19.33	19.94	20.25
10	25	24		19.42	20.05	20.14
10	50	0		19.34	19.96	20.13



LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	20.96	21.55	22.32
15	1	37		21.27	21.78	22.04
15	1	74		21.38	22.13	22.00
15	36	0		20.75	21.08	21.72
15	36	18		20.94	21.29	21.48
15	36	39		20.86	21.48	21.47
15	75	0		20.84	21.34	21.53
15	1	0	16-QAM	21.84	21.08	22.75
15	1	37		22.13	21.45	22.42
15	1	74		22.21	21.85	22.39
15	36	0		19.42	19.89	20.33
15	36	18		19.62	19.96	20.13
15	36	39		19.60	20.17	20.15
15	75	0		19.39	19.99	20.23
20	1	0	QPSK	21.05	21.51	22.40
20	1	49		21.46	21.79	22.19
20	1	99		21.42	22.29	22.05
20	50	0		20.80	21.12	21.70
20	50	24		20.97	21.36	21.69
20	50	49		20.90	21.51	21.60
20	100	0		20.88	21.36	21.59
20	1	0	16-QAM	20.89	21.11	22.35
20	1	49		21.21	21.42	22.16
20	1	99		21.24	21.89	22.02
20	50	0		19.45	19.78	20.43
20	50	24		19.78	19.99	20.41
20	50	49		19.59	20.15	20.31
20	100	0		19.49	19.96	20.27



LTE BAND 12

LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	24.78	24.70	24.76
1.4	1	2		24.65	24.74	24.75
1.4	1	5		24.76	24.76	24.82
1.4	3	0		24.81	24.60	24.74
1.4	3	1		24.85	24.64	24.80
1.4	3	2		24.82	24.74	24.83
1.4	6	0		24.38	24.21	24.28
1.4	1	0	16-QAM	25.10	23.71	23.80
1.4	1	2		25.00	23.71	23.80
1.4	1	5		25.04	23.65	23.83
1.4	3	0		24.13	23.81	23.61
1.4	3	1		24.12	23.75	23.66
1.4	3	2		24.16	23.80	23.73
1.4	6	0		22.98	22.87	22.76
3	1	0	QPSK	24.73	24.77	24.66
3	1	7		24.52	24.61	24.71
3	1	14		24.67	24.71	24.82
3	8	0		24.27	24.10	24.07
3	8	4		24.38	24.29	24.12
3	8	7		24.28	24.26	24.20
3	15	0		24.32	24.25	24.23
3	1	0	16-QAM	24.86	23.71	24.54
3	1	7		24.79	24.43	24.56
3	1	14		24.75	24.38	24.54
3	8	0		22.81	22.97	22.65
3	8	4		22.81	22.92	22.73
3	8	7		22.98	22.95	22.73
3	15	0		22.90	22.73	22.66



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	24.81	24.71	24.67
5	1	12		24.71	24.75	24.65
5	1	24		24.76	24.64	24.66
5	12	0		24.40	24.18	24.20
5	12	6		24.28	24.26	24.21
5	12	11		24.22	24.10	24.19
5	25	0		24.34	24.15	24.24
5	1	0	16-QAM	23.95	23.85	23.74
5	1	12		23.86	23.43	23.61
5	1	24		23.87	23.66	24.29
5	12	0		22.89	22.54	22.74
5	12	6		23.08	22.63	22.63
5	12	11		23.00	22.52	22.71
5	25	0		23.24	22.79	22.77
10	1	0	QPSK	24.78	24.66	24.67
10	1	24		24.73	24.61	24.64
10	1	49		24.63	24.79	24.73
10	25	0		24.24	24.23	24.15
10	25	12		24.25	24.23	24.16
10	25	24		24.32	24.12	24.14
10	50	0		24.27	24.31	24.13
10	1	0	16-QAM	24.78	24.36	24.12
10	1	24		24.68	24.37	24.28
10	1	49		24.63	24.46	24.11
10	25	0		23.08	22.79	22.71
10	25	12		22.77	22.71	23.05
10	25	24		22.71	23.08	22.73
10	50	0		22.80	22.75	23.01



LTE Band 17

LTE Band 17 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	24.70	24.50	24.63
5	1	12		24.65	24.40	24.57
5	1	24		24.64	24.58	24.64
5	12	0		24.20	24.17	24.36
5	12	6		24.11	24.06	24.10
5	12	11		24.27	24.34	24.28
5	25	0		24.17	24.15	24.18
5	1	0	16-QAM	23.85	24.18	23.93
5	1	12		23.77	24.38	23.79
5	1	24		23.78	24.32	23.90
5	12	0		22.58	22.63	22.67
5	12	6		22.51	22.91	22.56
5	12	11		22.51	22.73	22.64
5	25	0		22.76	23.02	22.72
10	1	0	QPSK	24.65	24.66	24.62
10	1	24		24.63	24.57	24.52
10	1	49		24.69	24.63	24.69
10	25	0		24.11	24.12	24.10
10	25	12		24.20	24.15	24.12
10	25	24		24.21	24.26	24.10
10	50	0		24.21	24.14	24.09
10	1	0	16-QAM	24.61	24.33	24.06
10	1	24		24.64	24.61	24.22
10	1	49		24.66	24.35	24.27
10	25	0		22.74	22.73	22.78
10	25	12		22.66	23.03	23.04
10	25	24		22.82	22.85	22.79
10	50	0		22.82	23.06	22.97



LTE Band 25

LTE Band 25 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.68	22.77	23.22
1.4	1	2		22.70	22.79	23.25
1.4	1	5		22.66	22.82	23.25
1.4	3	0		22.55	22.95	23.21
1.4	3	1		22.51	22.90	23.13
1.4	3	2		22.47	22.78	23.13
1.4	6	0		22.02	22.37	22.71
1.4	1	0	16-QAM	22.68	21.99	22.57
1.4	1	2		22.67	22.04	22.58
1.4	1	5		22.65	22.03	22.55
1.4	3	0		21.77	21.94	22.67
1.4	3	1		21.76	21.95	22.63
1.4	3	2		21.76	21.88	22.57
1.4	6	0		20.64	20.91	21.48
3	1	0	QPSK	22.49	22.73	23.20
3	1	7		22.39	22.76	23.19
3	1	14		22.39	22.74	23.24
3	8	0		21.96	22.38	22.57
3	8	4		22.07	22.41	22.69
3	8	7		21.88	22.34	22.58
3	15	0		21.93	22.36	22.65
3	1	0	16-QAM	22.78	21.33	22.60
3	1	7		22.74	21.36	22.60
3	1	14		22.60	21.40	22.54
3	8	0		20.42	20.88	21.28
3	8	4		20.39	20.90	21.29
3	8	7		20.38	20.92	21.35
3	15	0		20.63	20.91	21.32



LTE Band 25 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.40	22.87	23.12
5	1	12		22.31	22.88	23.14
5	1	24		22.15	22.90	23.13
5	12	0		21.91	22.45	22.67
5	12	6		21.85	22.31	22.66
5	12	11		21.84	22.37	22.67
5	25	0		21.97	22.43	22.75
5	1	0	16-QAM	21.83	21.56	22.14
5	1	12		21.75	21.64	22.18
5	1	24		21.67	21.65	22.25
5	12	0		20.47	20.79	21.29
5	12	6		20.44	20.90	21.29
5	12	11		20.44	20.77	21.33
5	25	0		20.48	21.03	21.20
10	1	0	QPSK	22.51	22.85	23.15
10	1	24		22.26	22.89	23.17
10	1	49		22.27	22.88	23.24
10	25	0		21.82	22.40	22.67
10	25	12		21.87	22.37	22.66
10	25	24		21.89	22.50	22.73
10	50	0		21.75	22.39	22.69
10	1	0	16-QAM	22.77	21.83	22.20
10	1	24		22.56	21.99	22.30
10	1	49		22.47	22.04	22.27
10	25	0		20.51	20.96	21.23
10	25	12		20.43	20.95	21.23
10	25	24		20.50	21.02	21.29
10	50	0		20.42	21.01	21.25



LTE Band 25 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.49	22.76	23.07
15	1	37		22.33	22.94	23.09
15	1	74		22.37	22.94	23.22
15	36	0		21.91	22.28	22.55
15	36	18		21.88	22.44	22.51
15	36	39		21.74	22.49	22.64
15	75	0		22.03	22.39	22.59
15	1	0	16-QAM	22.80	21.83	22.79
15	1	38		22.62	22.04	22.92
15	1	75		22.59	22.01	23.04
15	36	0		20.48	21.08	21.16
15	36	18		20.46	21.07	21.21
15	36	39		20.42	21.13	21.20
15	75	0		20.57	20.98	21.26
20	1	0	QPSK	22.45	22.76	22.99
20	1	49		22.24	23.22	23.22
20	1	99		22.46	23.25	23.37
20	50	0		21.80	22.26	22.45
20	50	24		21.72	22.31	22.61
20	50	49		21.86	22.33	22.63
20	100	0		21.79	22.36	22.52
20	1	0	16-QAM	21.68	21.36	21.77
20	1	49		21.43	21.59	22.00
20	1	99		21.68	21.66	22.15
20	50	0		20.53	20.89	21.08
20	50	24		20.49	20.92	21.22
20	50	49		20.65	20.92	21.31
20	100	0		20.46	20.97	21.28



LTE Band 26 Part22

LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.73	23.64	23.98
1.4	1	2		23.74	23.68	23.96
1.4	1	5		23.66	23.62	23.91
1.4	3	0		23.13	22.94	23.31
1.4	3	1		23.05	23.00	23.36
1.4	3	2		23.04	23.08	23.45
1.4	6	0		22.63	22.58	22.97
1.4	1	0	16-QAM	24.23	23.08	24.43
1.4	1	2		24.14	23.14	24.42
1.4	1	5		24.17	23.10	24.28
1.4	3	0		22.45	22.12	22.63
1.4	3	1		22.45	22.05	22.81
1.4	3	2		22.46	22.05	22.80
1.4	6	0		21.32	21.24	21.69
3	1	0	QPSK	23.63	23.60	23.97
3	1	7		23.59	23.58	23.76
3	1	14		23.54	23.66	23.96
3	8	0		22.67	22.43	22.83
3	8	4		22.57	22.50	22.83
3	8	7		22.65	22.47	22.88
3	15	0		22.65	22.46	22.97
3	1	0	16-QAM	24.28	23.08	23.53
3	1	7		24.17	23.09	23.59
3	1	14		24.17	23.08	23.61
3	8	0		20.90	21.06	21.45
3	8	4		20.99	21.08	21.47
3	8	7		20.98	21.11	21.59
3	15	0		21.21	21.07	21.50